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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,373

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Naoki Soejima

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FOLEY AND LARDNER LLP

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3000 K STREET NW

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EXAMINER

MCCREARY, LEONARD

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,373

Applicant(s)

SOEJIMA, NAOKI

Examiner

Leonard J. McCreary, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 6-7 stand rejected under 35 U.S.C. 102(b) as being anticipated by US 5,979,931 to Totani et al. Totani discloses an airbag cover and method of making the same comprising the following:

a. A method of producing a cover for covering a vehicle airbag, the method comprising the steps of: providing a three-dimensionally molded airbag cover 10 (col 6, lines 13-15); forming a tear line 18 with a predetermined depth within the thickness of the airbag cover by ultrasonic processing (col 6, lines 59-65) (claim 1.)

b. A cover for a vehicle airbag comprising: a three-dimensionally molded plate 10; a continuous linear groove 18 with a predetermined depth located in the plate; wherein the groove is formed by ultrasonic waves (col 6, lines 59-65) (claim 6.)

c. An airbag module comprising: an airbag 1; a cover 10 for covering the vehicle airbag; an accommodating member 4 for accommodating the vehicle airbag; and a gas supplying mechanism 2 for supplying inflation gas so that the

vehicle airbag is deployed and inflated from the accommodating member, wherein the cover comprises a three-dimensionally molded plate-shaped structure (Fig. 3) and has a linear groove 18 which is continuously disposed with a predetermined depth within the thickness of the airbag cover, and wherein, the module is configured so that when a vehicle collides at a location which is situated in front of the vehicle, the vehicle airbag is deployed by the inflation gas supplied from the gas supplying mechanism, causing the airbag cover to tear at the linear groove, so that the vehicle airbag is further deployed and inflated in a rider protection area which is situated in front of a rider (col 1, lines 5-15) (claim 7.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,308,391 to Blaimschein et al. The disclosure of Totani is discussed above. Totani does not teach the specifics of ultrasonic cutting. Blaimschein discloses a method of producing V-shaped grooves in a workpiece and teaches the following:

- d. The step of determining a distance **a** between a processing surface of the workpiece **W** and the predetermined location on the ultrasonic processing mechanism **R** (col 4, lines 1- 8.)

It would have been obvious to one of ordinary skill in the art at the time of invention to determine a distance between a processing edge of the ultrasonic processing mechanism and a predetermined location on the ultrasonic processing mechanism through calibration or "zeroing" of the cutting tool on the workpiece so as to provide the machine with a reference point regardless of tool size or wear. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the airbag cover of Totani to use the machine and method for forming a groove as taught by Blaimschein so as to maintain a certain cutting depth in the tear line (col 1, lines 35-48.)

5. Claims 3-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,308,391 to Blaimschein et al. as applied to claim 2 above, and further in view of US 6,737,607 to Nicholas et al. The disclosure of Blaimschein is discussed above. Blaimschein does not teach measuring the material removed from or remaining in the groove. Nicholas discloses an apparatus for cutting a groove into a workpiece and teaches the following:

- e. The step of estimating the depth of the tear line based on the determined first and second distances (col 3, lines 43-65) (claim 3.)
- f. The step of estimating the residual thickness of the cover at the tear line based on the determined first and second distances (col 3, lines 43-65) (claim 4.)

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It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Blaimschein to include measurement of material removed or material remaining as taught by Nicolas so as to hold tighter groove tolerances resulting from adaptive process control (col 2, lines 1-7.)

6. Claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,308,391 to Blaimschein et al. as applied to claim 2 above, and further in view of US 2002/0069736 to Yasoda et al. The disclosure of Blaimschein is discussed above. Blaimschein does not teach that the first distance is calculated. Yasoda teaches a cutting apparatus wherein the distance between the edge of a blade and a predetermined location on the machine is calculated in order to provide data for the control of the tool (paragraphs [0030] and [0031].) It would have been obvious to one of ordinary skill in the art at the time of invention to modify the ultrasonic cutting tool of Blaimschein to include calculation of the distance between the blade edge and a predetermined location as taught by Yasoda so as to provide the machine with data used to control the machining process.

7. Claims 8-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,512,575 to Marchi. The disclosure of Totani is discussed above and further discloses:

g. The processing edge is a blade edge (col 6, lin 60-67) (clm 11).

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8. Totani does not disclose a meter that measures distances. Marchi discloses a method and device for measuring the distance of an object in machining operations (col 1, lin 11-22) and teaches:

h. A meter that measures distances; further comprising the step of determining a distance between the meter and a processing edge of the ultrasonic mechanism (col 4, lin 53-54) (clm 8).

i. The surface is a reference block (col 4, lin 7-8) (clm 10).

9. Re claims 8-10, it would have been obvious to one of ordinary skill in the art at the time the apparatus was made to modify the airbag cover and method of Totani to include a measuring device and method as taught by Marchi so as to correctly position and exactly program the ultrasonic processing mechanism (col 1, lin 11-22), and further it would have been obvious to measure any number of distances between tool components, reference or processing surfaces, the measuring device, etc. as taught by Marchi throughout the disclosure and use those distances to calculate other distances, since calculations based on obtained measurements requires only very fundamental arithmetic and would therefore be well within the skill level of one in the art.

10. Claims 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,512,575 to Marchi as applied to claim 8 above, and further in view of US 6,308,391 to Blaimschein et al. The disclosure of Totani is discussed above. Totani does not disclose determining a processing depth.

11. The disclosure of Marchi is discussed above and further discloses:

- j. A plurality of detection points is used to determine the distance between the meter and a surface (col 5, lin 30-31) (clm 14).

12. Blaimschein discloses a method for producing V-shaped grooves in a thermoplastic and teaches:

- k. The step of determining a processing depth for the ultrasonic processing mechanism (col 4, lin 1- 9) (clm 12).

13. Re claim 12, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the airbag cover and method of Totani to include the step of determining a processing depth as taught by Blaimschein so as to maintain a predetermined cutting depth (col 4, lin 2-3).

14. Re claim 13, it would have been obvious to one of ordinary skill in the art at the time the apparatus was made to modify the airbag cover and method of Totani to include a measuring device and method as taught by Marchi so as to correctly position and exactly program the ultrasonic processing mechanism (col 1, lin 11-22), and further it would have been obvious to measure any number of distances between tool components, reference or processing surfaces, the measuring device, etc. as taught by Marchi throughout the disclosure and use those distances to calculate other distances, since calculations based on obtained measurements requires only very fundamental arithmetic and would therefore be well within the skill level of one in the art.

15. Claim 15 stands rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,979,931 to Totani et al. in view of US 6,512,575 to Marchi, further in view of US

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6,308,391 to Blaimschein et al. as applied to claim 12 above, and further in view of US 6,737,607 to Nicholas et al. The disclosure of Totani is discussed above. Totani does not disclose the step of determining the residual thickness of the airbag cover. Nicholas discloses an apparatus for cutting a workpiece and teaches:

. I. Determining a residual thickness of the workpiece (col 1, lin 60-65).

16. It would have been obvious to one of ordinary skill in the art at the time the apparatus was made to modify the airbag cover and method of Totani to include the step of determining the residual thickness of the airbag cover as taught by Nicholas so as to more precisely control the scoring of the airbag cover (Summary of the Invention).

Response to Arguments

17. Applicant's arguments filed 29 September 2006 have been fully considered but they are not persuasive.

18. Re claims 1 and 6-7, Applicant argues Totani fails to disclose that the concave portion is formed to a predetermined depth, citing col 5, lin 26-35. Examiner disagrees and notes Totani discloses at least two embodiments of the invention wherein the concave portion is formed to predetermined depths; Figure 6 shows the concave portion penetrating an intermediate layer and Figure 7 shows the concave portion penetrating only a single layer. Selection of one embodiment or the other inherently requires forming the concave portion to a predetermined depth. Re the text of Totani cited by Applicant, Examiner notes:

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m. Applicant's argument is drawn to the decorative skin layer 13 of Totani, not the entire "**thickness of the airbag cover**" as claimed.

n. The text cited explains the failure mechanism of the cover upon airbag deployment; it does not state that the tear line does not have a predetermined depth.

o. The thickness of the skin layer of Totani is up to an order of magnitude smaller than other layers of the cover (col 3, lin 60-64), so although Totani states, "it is unnecessary to control the thickness of the skin layer," it would be a departure from the scope of the invention and altogether unreasonable to increase the thickness of the skin layer by such a magnitude that it would render ineffective the tolerance of the predetermined depth of the tear line; i.e. it would be within the skill level of one in the art to place upon the predetermined depth of the tear line a tolerance suitable for absorbing the reasonable variations of the already very thin "uncontrolled" skin thickness.

19. Re claims 2-5, Applicant argues Blaimschein does not disclose two steps of determining a distance in relation to an ultrasonic processing mechanism. Examiner refers to previous Office Action and also notes that in the art of machining or surface processing such as this, the steps of claim 2 are inherently performed since the ultrasonic processing could not take place without the steps of claim 2. The tool has a "home" position (predetermined location on machine), when a machine operator inserts a tool, the machine then has a processing edge, and when a workpiece is positioned on the machining table, there becomes a processing surface. The machine cannot perform

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its function if any of several distances are unknown. Finding these distances through measurements and/or calculations is typically physically only one step of the machining process, which is routinely performed either manually by the operator or automatically by the machine. This is routine and well within the skill level of an ordinary worker in the art.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. McCreary, Jr. whose telephone number is 571-272-8766. The examiner can normally be reached on 0700-1700 M-F.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Leonard J. McCreary, Jr.
Examiner
Art Unit 3616



DAVID R. DUNN
PRIMARY EXAMINER